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AMSAT NEWS SERVICE
ANS-212

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* ARISSat-1/KEDR On-Air Test Successful; Next: Deployment on August 3
* Radio-to-Soundcard Interface For Access to ARISSat-1/KEDR Bandwidth
* Get Ready for ARISSat-1/KEDR BPSK-1000 Telemetry
* Get Ready for ARISSat-1/KEDR SSTV Reception
* N7HPR Blog in EE Times Magazine Documents ARISSat-1/KEDR Development
* View Student Projects Flying on ARISSat-1
* FUNcube Vibration Testing Videos
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-212.01
ARISSat-1/KEDR On-Air Test Successful; Next: Deployment on August 3

AMSAT News Service Bulletin 212.01
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.01

ARISSat-1/KEDR ON-AIR TEST SUCESSFUL

ARISSat-1/KEDR reception reports from the July 30 - 31 on-air test aboard the International Space Station have been received from amateur radio stations around the world. Africa, South America, parts of Asia were within range of the footprint first. Next Europe and North America will be in range.

Here is a sampling of the signal reports received via amsat-bb:

Johan, ZS1I - in South Africa reported hearing the ARISSat-1/KEDR SSTV signal using a handheld and a rubber duck antenna.

Nader Omer, ST2NH - In Khartoum, Sudan Last pass 22.50 UTC I heard a weak voice before LOS! It sounded like a recorded message. No SSTV or Telemetry.

Mineo Wakita, JE9PEL - In Japan, I heard ARISSat-1/KEDR VOICE and SSTV strong signal, S9 + over 40dB at 23:12-23:22UTC, 30 Jul 2011. The received SSTV picture can be viewed at:
http://www.ne.jp/asahi/hamradio/je9pel/10731ari.png

Masa, JN1GKZ - In Japan, the 0051z pass was also good signal from ARISSat-1/KEDR and ISS. SSTV, voice msg and voice tlm were heard. At 0056z the CW telemetry decoded as:

[bat 29.72v -214ma rf 346ma hi this is ariss at 1 r]
I got SSTV picture from ARISSat-1 at 2140z. The picture is noisy
but fine!

Luciano, PY5LF - In Brazil, signal heard a few minutes ago on
145.950. Recorded video of the pass at:
http://www.youtube.com/watch?v=z_-DLZq9gmc

Reports received from Sergey Samburov, RV3DR say that ARISSat-1/KEDR
is in 'test mode', using the same setup as was used back in April
for the Gagarin Commemoration where the TM-D710 on board the ISS
is 'repeating' the ARISSat-1/KEDR output signal on 437.550 MHz

Please report signals heard, location, and equipment by e-mail to:
julytest@arissat1.org.

NEXT: DEPLOYMENT ON AUGUST 3

ARISSat-1/KEDR is now ready for deployment from the International
Space Station during EVA 29 on August 3.

NASA TV will cover the EVA live starting at 1400 GMT on August 3.
1430: Hatch Open
1446: Egress ARISSat-1/KEDR and secure to airlock ladder
1452: Remove solar panel covers
1507: Translate to deploy site, activate PWR, TIMER1 and TIMER2
      switches, verify LEDs on, and deploy
(Internet streaming: http://www.nasa.gov/multimedia/nasatv/index.html)

ARISSat-1/KEDR is a satellite designed and built by amateur radio
operators to specifically interest students in scientific and tech-
nological careers. Through the use of ham radio equipment, students
and teachers should be able to access and utilize the satellite from
a classroom environment with minimal set up.

ARISSat-1/KEDR is a cooperative effort between AMSAT, ARISS (Amateur
Radio on the International Space Station,) RSC-Energia (The Russian
Space Agency) and NASA. The design, development and construction of
the satellite was done by AMSAT volunteers. Original plans called
for the satellite to be housed inside an old Russian spacesuit, but
when the suit became unavailable, a spaceframe was developed to house
the radio equipment and solar panels. The new satellite was named
ARISSat-1/KEDR. Another name for the spacecraft is RadioSkaf-V. The
transmitted callsign will be RS01S.

The mission was specifically designed as an education-based satellite.
Some of its broadcast features include a voice identification, voice,
digital and morse code telemetry, stored image and on-board camera
transmissions via Slow Scan TV and digital telemetry from a Russian
science experiment that will measure vacuum in earth's lower atmo-
sphere. Other aspects of the mission include CW (Morse code) and
voice message contests to interest students in participating along
with stored images submitted by students all over the world as part
of its payload.

145.950 MHz FM Downlink

FM transmissions will cycle between a voice ID as RS01S, select tele-
metry values, 24 international greeting messages in 15 languages and
SSTV images. One of the messages will be a conversation between Yuri
Gagarin and ground control.

If you successfully receive the SSTV transmissions, you are invited
to upload your picture to to the ARISS SSTV Gallery:

http://www.amsat.org/amsat/ariss/SSTV/

435 MHz - 145 MHz Linear Transponder

The linear transponder will operate in Mode U/V (70 cm Up, 2m Down). It is an 16 KHz wide inverting passband and the convention will be to TX LSB on the 435 MHz uplink and RX USB on the 145 MHz downlink. This mode is designed to work with low power transmitters and omni antenna.

145.919 MHz/145.939 MHz CW Beacons

The CW transmissions will be callsign ID RS01S, select telemetry, and callsigns of people actively involved with the ARISS program.

145.920 MHz SSB BPSK-1000 Telemetry

The BPSK transmissions will feature a new 1kBPSK protocol developed by Phil Karn, KA9Q to be readable in low signal level conditions. The BPSK data will transmit satellite telemetry. When the CW2 beacon on 145.919 MHz is active this indicates that the BPSK-1000 format is being transmitted. If the CW1 beacon on 145.939 MHz is active this indicates the backup of BPSK-400 format is being transmitted.

AMSAT needs your telemetry from ARISSat-1/KEDR. Since there are no "Whole Orbit Data" storage mechanisms onboard ARISSat-1/KEDR, your submissions are the only way for AMSAT to collect the spacecraft telemetry and KURSK experiment results.

+ The telemetry may be recorded using the FunCube dongle or SDR-IQ receivers. After decoding the recorded file ARISSat-1/KEDR and Kursk telemetry CSV files (in the ARISSatTLM folder) can be sent as an e-mail attachment to telemetry@arissattlm.org

+ If you are running ARISSatTLM and receiving the signal "live" from ARISSat-1/KEDR, please enable the telemetry forwarding option.

+ The latest telemetry can be seen LIVE on your computer or cell phone at: http://www.arissattlm.org/mobile

TRACK STATUS on OSCAR STATUS PAGE

David Carr, KD5QGR will add ARISSat-1/KEDR to the list of satellites at the popular "Live OSCAR Satellite Status Page" at: http://oscar.dcarr.org/ You are invited to submit your reports on this page.

USEFUL LINKS

Download the Windows and Mac versions of the ARISSatTLM free ground station soundcard demodulator and display software: http://www.arissattlm.org

The ARISSatTLM software user guide is available: http://tinyurl.com/42uhtyf (amsat.org)

Get your color ARISSat-1/KEDR Frequency Guide: http://tinyurl.com/4t497t2 (amsat.org)

ARISSat-1/KEDR Presentation Slides (~1MB) http://tinyurl.com/4n4pzkm (amsat.org)

ARISSat-1/KEDR Dayton Presentation Slides http://tinyurl.com/6zrfmzv (amsat.org)

Follow ARISSat-1/KEDR on Twitter:
http://twitter.com/#!/arissat1
In USA you can also text 'follow Arissat1' to 40404 with your
cell phone. (leave off the quotes).

More information on the transmission schedule and overall mission
of ARISSat-1/KEDR can be found at:

ARISSat-1/KEDR Web site: http://www.arissat1.org
AMSAT Web site: http://www.amsat.org
ARISS Web site: http://www.ariss.org
ARISS Facebook Page: Amateur Radio on the ISS (ARISS)
ARISS Twitter site: @ARISS_status

The Radio Amateur Satellite Corporation (AMSAT) is a non-profit,
volunteer organization which designs, builds and operates experi-
mental amateur radio satellites and promotes space education. We
work in partnership with government, industry, educational insti-
tutions and fellow amateur radio societies. We encourage technical
and scientific innovation, and promote the training and development
of skilled satellite and ground system designers and operators. Our
vision is to deploy satellite systems with the goal of providing
wide area and continuous coverage for amateur radio operators world-
wide. AMSAT is also an active participant in human space missions
and supports satellites developed in cooperation with the educational
community and other amateur satellite groups.

Amateur Radio on the International Space Station (ARISS) is a volun-
teer program which inspires students, worldwide, to pursue careers
in science, technology, engineering and math through amateur radio
communications opportunities with the International Space Station
on-orbit crew. Students learn about life on board the ISS and explore
Earth from space through science and math activities. ARISS provides
opportunities for the school community (students, teachers, families
and local residents) to become more aware of the substantial benefits
of human space flight and the exploration and discovery that occur on
space flight journeys along with learning about technology and amateur
radio.

[ANS thanks the ARISSat-1/KEDR Team for the above information]

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SB SAT @ AMSAT $ANS-212.02
Radio-to-Soundcard Interface For Access to ARISSat-1/KEDR Bandwidth

AMSAT News Service Bulletin 212.02
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.02

The ARISSat-1/KEDR FM downlink on 145.950 MHz will be audible on
all common 2 meter amateur radio receivers with no modification
needed to your equipment. A CW/SSB receiver will also receive the
CW beacons on 145.919 MHz or 145.939 MHz and the signals on the
linear transponder passband between 145.922 to 145.938 MHz.

To take advantage of the full bandwidth of the downlink for SSTV,
CW Decoding, BPSK Decoding you'll need to add a few things:

+ You'll need an audio patch cable from your receiver to your

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  computer soundcard audio input. If you are already on the air
  with other amateur radio soundcard applications then you are
  ready with the hardware to receive, decode, and display the
  SSTV, BPSK-1000 or BPSK-400 downlinks.

+ You'll need SSTV software (refer to the SSTV news item)

+ You'll need the ARISSatTLM software to decode the BPSK
  telemetry. (refer to the ARISSatTLM news item)

The key difference is that the SSTV signal is transmitted on the
FM downlink on 145.950 MHz. The BPSK-1000 downlink is transmitted
in SSB mode on 145.920 MHz. Depending on your equipment you may
need to fabricate an audio patch to the computer soundcard input
from both your 2 meter FM radio and 2 meter SSB radio.

An initial "RECEIVE ONLY" configuration is easily done consisting
of an audio patch cable between your radio and the soundcard. The
ARISSat-1/KEDR team testing the software noted that a minimal set
up consisting of an audio cable from the speaker or headphone out-
put from the radio to the line (or mic) input on your PC sound card
was successful. If your rig has a 'Line Out' audio connection this
can be run to the soundcard 'Line In' connection.

Many amateur radio "digital modes" articles, web pages, and books
also discuss the more complex requirements to interface your trans-
mitter to the soundcard and to control the push-to-talk functions.
This is NOT required for you to successfully receive, decode, and
display the signals you receive from ARISSat-1/KEDR. To join into
the all the fun your "RECEIVE ONLY" configuration will just need
the audio cable!

[ANS thanks the ARISSat-1/KEDR Team for the above information]

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SB SAT @ AMSAT $ANS-212.03
Get Ready for ARISSat-1/KEDR BPSK-1000 Telemetry

AMSAT News Service Bulletin 212.03
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.03

The BPSK transmission from ARISSat-1/KEDR will feature a new 1kBPSK
protocol developed by Phil Karn, KA9Q to be readable in low signal
level conditions. The BPSK data will transmit satellite telemetry
and data from the Kursk experiment.

You'll need to take a few steps to get your station set up to
receive, decode, and display the BPSK-1000 telemetry data:

1. You need a 2 meter SSB receiver.

2. An audio patch cable between your receiver and computer's
   soundcard is required.

3. Download the ARISSatTLM ground station soundcard demodulator
   and display software.

   Windows:
   http://www.arissattlm.org/download/ARISSatTLM_050_Setup.exe
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   MAC:
   http://www.arissattlm.org/download/ARISSATTLM.zip

   The ARISSatTLM Software Quick Start Guide is available:
   http://tinyurl.com/42uhtyf (amsat.org)

4. Follow the instructions in the ARISSatTLM Software Quick Start
   Guide to install the software.

The ARISSatTLM software can decode BPSK signals in two modes:

+ Playback and decode a recorded file (even if you do not have
  a 2 meter SSB receiver you can experiment with the software
  and test file to learn about telemetry decoding and display!)

+ Live, off-the-air capture

Playback and Decode a Recorded File
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ARISSatTLM requires the recorded data to be in the WAV format.
Compression formats such as MP3 are not suitable and will not
decode and display correctly. Although .WAV files are notably
large, usually several megabytes, they capture all of the bits
of the signal. Compressed file formats sound OK to the human
ear but save file space by eliminating bits from the recorded
stream. You need to capture and record as many of the downlink
bits as possible. An occasional noise burst or momentary fade
is handled by the Forward Error Correction capability of the
ARISSatTLM software.

Download the BPSK Test File
---------------------------
A link to a BPSK test file suitable for operation with the
current release of ARISSatTLM software will be released soon
to http://www.arissattlm.org.

NOTE: Some earlier BPSK test recordings that are on the internet
will not work because they were created with earlier versions of
the satellite's onboard software (the satellite software and
ARISSatTLM are a "matched pair").

1. Start the ARISSatTLM program on your computer.

2. Click the start button in the lower left of the Tuning
   Indicator window.

3. In the ARISSatTLM Version 0.50 Window select:
   File --> Open WAVE file.
   Select the ARISSatTLM test file you previously downloaded.

4. The Tuning Indicator window will show the "CW Bump" at
   proper location (note the "Put CW signal here" indicator).

5. The Morse Code Decoder will decode and stream the CW
   message.

6. The ARISSatTLM Telemetry as Text window will decode and
   display data.

7. The ARISSatTLM window will display the received data
   as received.

8. The display will stop when the end of file is reached.
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Live Off The Air Telemetry Capture and Display

The ARISSat-1 BPSK-1000 downlink is transmitted in SSB mode on 145.920 MHz. When the CW2 beacon on 145.919 MHz is active this indicates that the BPSK-1000 format is being transmitted. If the CW1 beacon on 145.939 MHz is active this indicates the backup of BPSK-400 format is being transmitted.

Transmitting at 100 mW, both BPSK rates include Forward Error Correction (FEC) and it is expected that modest quarter-wave antennas with low-loss coaxial cable will provide sufficient signal strength for decoding and display by the ARISSatTLM software.

BPSK-1000 sounds like a "shusssch" with a higher pitch than the 400 bps growl. It is difficult to tune by ear. The BPSK beacon is centered 1 kHz above the CW2 beacon so that the CW beacon sits in the lower spectral null of the BPSK signal, i.e., in a narrow spot where there's no BPSK signal power.

If you put your receiver in USB mode and tune the CW beacon so it comes out at an audio frequency of 500 Hz, this will automatically center the BPSK signal in a conventional SSB filter extending from 300-2700 Hz. The Tuning Indicator window helps you tune the signal correctly.

Follow the recommendations in the ARISSatTLM Quick Start Guide for tuning and decoding the BPSK telemetry data. Once you are tuned in correctly (and adjust for doppler shift) you will be able to decode the BPSK-1000 signal. You will also be able to copy the CW2 beacon text in the Morse Code Decoder window.

AMSAT needs your telemetry from ARISSat-1/KEDR. Since there are no "Whole Orbit Data" storage mechanisms onboard ARISSat-1/KEDR, your submissions are the only way for AMSAT to collect the spacecraft telemetry and KURSK experiment results.

+ The telemetry may be recorded using the FunCube dongle or SDR-IQ receivers. After decoding the recorded file ARISSat-1/KEDR and Kursk telemetry CSV files (in the ARISSatTLM folder) can be sent as an e-mail attachment to telemetry@arissattlm.org

+ If you are running ARISSatTLM and receiving the signal "live" from ARISSat-1/KEDR, please enable the telemetry forwarding option.

+ The latest telemetry can be seen LIVE on your computer or cell phone at: http://www.arissattlm.org/mobile

[ANS thanks the ARISSat-1/KEDR Team for the above information]

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SB SAT @ AMSAT $ANS-212.04
Get Ready for ARISSat-1/KEDR SSTV Reception

AMSAT News Service Bulletin 212.04
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.04

The ARISSat-1 FM downlink on 145.950 MHz includes live SSTV images as part of the cycling voice ID, select spoken telemetry values, and the international greeting messages. Here are some pointers to help you get your station ready to receive and display the SSTV pictures transmitted by ARISSat-1.

One fun feature is that there are four SSTV cameras mounted on the spacecraft. On photos of ARISSat-1 you may have noticed black brackets on the outside of the spacecraft. These hold the mirrors that reflect the light onto the lens of the cameras. The software-defined-transponder will use the image data from the cameras to generate the SSTV downlink.

ARISSat's software will sequentially select a new or stored image from one the four cameras. There are two pre-recorded images as part of the sequence. The camera that took the the picture can be identified by the color of the call sign in the upper left of the SSTV image. The SSTV image will be sent down as FM audio SSTV in Robot 36 format on 145.950 MHz about every 140 seconds.

The RF downlink power on the 145.950 MHz FM downlink will be 250mW which is predicted to provide a link margin around 6 dB on an HT with a 'big whip' when the satellite is at 15 degrees elevation. This should be sufficient to receive SSTV pictures although you may need to orient the whip to line up the antenna polarization.

ARISSat-1 is not stabilized so the antenna orientation is unpredictable and a certain amount of fading will happen. The receiving link margin may be improved with a handheld beam such as an "Arrow", "Elk", or "Cheap Yagi" antenna.
(See: http://www.wa5vjb.com/references/Cheap%20Antennas-LEOs.pdf)

See the news bulletin regarding tips and pointers for the audio interface between your radio and your computer's sound card. When running your SSTV software just adjust the sound card audio gain slider and/or radio volume control so that the SSTV signal is within the center part of the bar. MMSSTV will give you an "overflow" indication if the volume is too high.

SSTV Software Download Sites

There are many amateur radio SSTV software decoding applications available. One of the easiest to use on Windows computers is the MMSSTV program. This can be downloaded from:
http://mmhamsoft.amateur-radio.ca/pages/mmsstv.php

The Ham Radio Deluxe software package also includes SSTV operation.

SSTV software for the Mac is available at:
http://web.me.com/kd6cji/MacSSTV/MultiScan.html

If you successfully receive the SSTV transmissions, you are invited to upload your picture to to the ARISS SSTV Gallery:
http://www.amsat.org/amsat/ariss/SSTV/

[ANS thanks the ARISSat-1 Team for the above information]

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SB SAT @ AMSAT $ANS-212.05
N7HPR Blog in EE Times Magazine Documents ARISSat-1/KEDR Development

AMSAT News Service Bulletin 212.05

>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.05

Steve Bible, N7HPR shares his tale of how amateur radio lead to his opportunities in his professional life as an engineer at Microchip Technology, And, as Steve says, "Eventually becoming one of the most interesting projects I've ever worked on."

Steve continues, "Over the next several weeks, this limited-series guest blog will relate the story of how my colleagues and I came to build an amateur satellite, the challenges we ran into while doing so and, hopefully, its successful deployment from the International Space Station."

In this blog, Steve hopes to recount the highlights from that journey and tell you about some of the technical as well as personal trials and tribulations. How does a diverse group of folks, from all walks of life, interests and professions, create an amateur satellite to be deployed on the ISS? Tune in and see!

Follow Steve's Blog on the EE Times website, http://www.eetimes.com, then follow the EE Life -> Blogs link for future installments.

The article can be found on-line at:
http://tinyurl.com/3lddtou (eetimes.com)

[ANS thanks EE Times and Steve Bible, N7HPR for the above information]

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SB SAT @ AMSAT $ANS-212.06
View Student Projects Flying on ARISSat-1/KEDR

AMSAT News Service Bulletin 212.06
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.06

ARISSat-1/KEDR will carry many education-based features encouraging student interaction. During the development of the satellite, students from around the world were invited to submit images and letters documenting their participation in science activities and projects.

These submissions have been processed and stored on a memory chip that has been attached to ARISSat-1/KEDR and is flying along with the craft as it orbits the Earth. The student projects and photos can all be viewed ARISS Europe web site at:
http://www.ariss-eu.org/arissat-1.htm

[ANS thanks ARISS-Europe for the above information]

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SB SAT @ AMSAT $ANS-212.07
FUNcube Vibration Testing Videos

AMSAT News Service Bulletin 212.07
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011

To All RADIO AMATEURS
BID: $ANS-212.07

AMSAT-UK has released two videos showing vibration testing of the
FUNcube satellite.

This video shows the general layout of the RAL vibration testing facil-
ity, and includes interviews with Graham and David at the conclusion of
our testing: http://vimeo.com/26951186

This is a short video showing what happens during a 'high sine' test.
The test is being performed in the Z axis. Hold your breath!!
http://vimeo.com/26954073

AMSAT-UK photos of the testing can be viewed at:
http://www.uk.amsat.org/archives/funcube-enviromental-testing-at-ral

An additional news article can be read at the Southgate Amateur Radio
News site at:
http://www.southgatearc.org/news/july2011/funcube_videos.htm

[ANS thanks Trevor, M5AKA for the above information]

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SB SAT @ AMSAT $ANS-212.08
Satellite Shorts From All Over

AMSAT News Service Bulletin 212.08
>From AMSAT HQ SILVER SPRING, MD.
July 31, 2011
To All RADIO AMATEURS
BID: $ANS-212.08

+ Clint Bradford, K6LCS will be talking about ARISSat-1/KEDR and
  Working the FM Ham Satellites on August 2 at 6PM PDT during the
  recording session of the Ham Nation video podcast - the "Bob
  Heil and Gordon West" show in Leo LaPorte's TWIT.tv network.
  They'll also remind viewers to support AMSAT and endeavours
  like ARISSat-1.
  http://twit.tv - click on LIVE 6PM PDT August 2, or
  http://twit.tv/hn - to watch all Ham Nation episodes

+ Clint Bradford, K6LCS, will step out of the recording studio
  to present his 'Working Amateur Satellites With Your HT' ses-
  sion in Perris, CA on August 4 and in Rialto, CA on August 20.
  ALL are welcome to attend these club meetings!
  Thursday, August 4 - 6:30PM
  Lake Perris Event Center - Lot 9
  17801 Lake Perris Drive, Perris CA 92571

  Saturday, August 20, 2011 - 10:00AM
  Rialto Fire Department - Station 201
  131 S Willow Avenue, Rialto CA 92376

  Attendees should download Clint's four-page tutorial and radio
  programming data from http://www.work-sat.com
  Clint welcomes pre-presentation questions. Call him at 909-1241-7666,
  or send email to . clint@clintbradford.com

+ Bob, KC2WYH invites you to be on the lookout for the Roseland Amateur
  Radio Club, K2GQ, operating from the "National Night Out" on Tuesday,
  August 2nd in Livingston, New Jersey with various ham radio demonstra-

tions. There is a high elevation pass by AO-51 at 2026-Z (4:26 p.m. EDT) within range of the special event.

+ Look for Makoto, JI5RPT to be active as JD1BLY from Chichijima Island (IOTA AS-031) Ogasawara. Operation is planned for 40m to 6m and Satellite CW/SSB/DIGI between August 1-7. QSL via JI5RPT. Web based log will be found at: http://www.ji5rpt.com/jd1/ and you are also invited to monitor Twitter: http://twitter.com/jd1bly (ji5rpt@jarl.com)

+ Heads up this August 5-7: Be sure to look for W1AW/5 operating on all available satellites from Taos, New Mexico during the 2011 ARRL Rocky Mountain Division Convention. http://www.2011convention.org. More information can also be found on Ollie's AB1JO QRZ page: http://www.qrz.com/db/aj1o/

+ Look for John, VA3BL operating from the Trent Severn Waterway in grid FN04 + FN14 in Ontario, Canada, August 1-7 with the arrow and HT. He Will try to be on AO-51, SO- 50 and any other FM satellites that are available.

+ ZB2, GIBRALTAR Astronaut Edmondo,VA3ITA/IW0GVP, will be QRV as ZB2/VA3ITA from the Rock of Gibraltar from Aug 8-11. Activity will take place on CW, SSB, digital modes and via satellites. Edmondo is also willing to make skeds. More information and his e-mail address can be found on QRZ.com. QSL via VA3ITA. (DXNL 1738 - Jul 27, 2011 DX Newsletter

+ On Saturday July 23, 2011 at 09:45 UTC, ESA Space Camp 2011, San Rossore Park, Pisa, Italy established a direct ARISS (Amateur Radio on the International Space Station) contact with NASA astronaut Michael E. Fossum KF5AQG onboard the International Space Station. Astronaut Fossum operated with the ISS callsign OR4ISS. The ESA Space Camp 2011 operated the contact with ARI "Versilia" club station call sign IQ5VR. The event can seen in an ESA video at: http://tinyurl.com/3esggh7 (livestream.com)
Additional coverage of the event is provided by Southgate News Site: http://www.southgatearc.org/news/july2011/ariss_event_success_2307.htm

+ We wish we could have an antenna like this! But this one is in space: A newly-launched Russian radio telescope successfully unfurled a 10-meter dish-shaped reflector overcoming one of the biggest risks on the observatory's ambitious mission to see inside black holes and view other cosmic phenomena. Read about the details at: http://spaceflightnow.com/news/n1107/25spektr/

+ A great 10 minute video is available about Vietnam's Cubesat F-1 http://www.youtube.com/watch?v=iAAWE1PDuAM

+ Jan, ON7UX posted the AMSAT-ON video report about OUFTI-1 the D-STAR CubeSat on YouTube http://www.youtube.com/watch?v=UXmqYy_Q_Wg

+ The August, 2011 On-Line Edition of the WorldRadio Magazine (CQ Publications) mentions Peter's efforts on behalf of AMSAT in regards to HR607. The free magazine is a huge PDF file: http://worldradiomagazine.com/wro_issues/2011/WRO_08_2011.pdf
The Satellites column begins on Page 24 of this issue. They also provide good coverage of the other ANS bulletin items we've issued.

+ Information about a CubeSat under development at University of Puerto Rico in Mayaguez (UPRM) can be found on-line in their blog at: http://cubesatuprm.wordpress.com/ A video of the student project is posted at: http://www.youtube.com/watch?v=YN5rM5Dxs-k (Spanish)

+ Photos of satellite operation taken by Dave KB5WIA during his
  camping trip to Eagle Lake in Lassen National Forest, which is
  in Northern California and grid CN90 can be viewed at:
  http://tinyurl.com/3edhgas (kb5wia.blogspot.com)

+ Shamai Opfer 4Z1WS gave a talk on Israel's new 3U CubeSat InKlajn-1
  to the AMSAT-UK International Space Colloquium. It is planned to
  provide telemetry using 1200bps BPSK and 1200bps AFSK with an option
  of 400bps BPSK and 1200bps MSK. Downlink frequencies of 145.815 MHz
  and 145.950 MHz have been coordinated by the IARU Satellite Frequency
  Coordination panel. More news and a video of the ejection tests can
  be seen at: http://www.southgatearc.org/news/july2011/inklajn_1.htm

+ The next dates for the Hudson Valley Satcom net are August 4,
  August 18, and September 1 at 8:00 PM Eastern Daylight Time (UTC - 4).
  You can tune in via the 146.970 MHz Mt. Beacon repeater, PL 100.0 or
  via EchoLink on the N2EYH-L node. More info is available at:
  http://www.hvsatcom.org (Stu, WA2BSS)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining donors
to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office. And with that
please keep in mind the ham who made a frantic phone call, "My wife is
pregnant and her contractions are only two minutes apart!" "Is this
her first child?" the doctor asked. "No!" the ham shouted, "This is
her husband!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM